RAW SEQUENCE LISTING DATE: 09/28/2000 PATENT APPLICATION: US/09/662,784 TIME: 09:31:16

Input Set : A:\Pto.amc

Output Set: N:\CRF3\09282000\1662784.raw

## SEQUENCE LISTING

```
4 (1) GENERAL INFORMATION:
              (i) APPLICANT: Bruce L. Rogers et al.i
              (ii) TITLE OF INVENTION: A HUMAN T CELL REACTIVE FELINE PROTEIN
      8
                                          (TFRP) ISOLATED FROM HOUSE DUST AND USES THEREFOR
      9
            (iii) NUMBER OF SEQUENCES: 103
     11
     13
             (iv) CORRESPONDENCE ADDRESS:
                    (A) ADDRESSEE: LAHIVE & COCKFIELD, LLP
                    (B) STREET: 28 State Street
     16
                    (C) CITY: Boston
                    (D) STATE: Massachusetts
     17
                    (E) COUNTRY: USA
     18
              (F) ZIP: 02109
(V) COMPUTER READABLE FORM:
     19
     21
                    (A) MEDIUM TYPE: Floppy disk
     22
     23
                    (B) COMPUTER: IBM PC compatible
                    (C) OPERATING SYSTEM: PC-DOS/MS-DOS
     24
     25
                     (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
     27
             (vi) CURRENT APPLICATION DATA:
C--> 28
                    (A) APPLICATION NUMBER: US/09/662,784
C--> 29
                    (B) FILING DATE: 15-Sep-2000
            (vii) PRIOR APPLICATION DATA:
     39
                    (A) APPLICATION NUMBER: US 08/431,184
     32
     33
                    (B) FILING DATE: 27-APR-1995
     36
                    (A) APPLICATION NUMBER: US 08/430,014
     37
                    (B) FILING DATE: 27-APR-1995
     40
                    (A) APPLICATION NUMBER: US 08/300,928
                    (B) FILING DATE: 02-SEPT-1994
           (viii) ATTORNEY/AGENT INFORMATION:
     43
                    (A) NAME: Amy E. Mandragouras
                    (B) REGISTRATION NUMBER: 36,207
     45
                    (C) REFERENCE/DOCKET NUMBER: IMI-044DV3
     46
             (ix) TELECOMMUNICATION INFORMATION:
     48
        (1x) TELECOMMUNICATION INFORMATION

(A) TELEPHONE: (617)227-7400

(B) TELEFAX: (617)742-4214

(2) INFORMATION FOR SEQ ID NO: 1:

(i) SEQUENCE CHARACTERISTICS:
     49
     50
     53
                    (A) LENGTH: 418 base pairs
     57
                    (B) TYPE: nucleic acid
                    (C) STRANDEDNESS: single
                    (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: cDNA
     61
             (ix) FEATURE:
                    (A) NAME/KEY: CDS
(B) LOCATION: 2..283
     65
     66
             (ix) FEATURE:
     68
                    (A) NAME/KEY: mat_peptide
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/662,784

DATE: 09/28/2000
TIME: 09:31:16

Input Set : A:\Pto.amc

```
(B) LOCATION: 74..283
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
75 C TGC ATC ATG AAG GGG GCT CGT GTT CTC GTG CTT CTC TGG GCT GCC
   Cys Ile Met Lys Gly Ala Arg Val Leu Val Leu Trp Ala Ala
-24 -20 -15 -10
79 TTG CTC TTG ATC TGG GGT GGA AAT TGT GAA ATT TGC CCA GCC GTG AAG 80 Leu Leu Leu Ile Trp Gly Gly Asn Cys Glu Ile Cys Pro Ala Val Lys
81
                      - 5
83 AGG GAT GTT GAC CTA TTC CTG ACG GGA ACC CCC GAC GAA TAT GTT GAG
                                                                                       142
84 Arg Asp Val Asp Leu Phe Leu Thr Gly Thr Pro Asp Glu Tyr Val Glu
        10
                                15
                                                            20
87 CAA GTG GCA CAA TAC AAA GCA CTA CCT GTA GTA TTG GAA AAT GCC AGA
                                                                                       190
88 Gln Val Ala Gln Tyr Lys Ala Leu Pro Val Val Leu Glu Asn Ala Arg
89 25 30 35
91 ATA CTG AAG AAC TGC GTT GAT GCA AAA ATG ACA GAA GAG GAT AAG GAG
92 Ile Leu Lys Asn Cys Val Asp Ala Lys Met Thr Glu Glu Asp Lys Glu
93 40 45 50 55
95 AAT GCT CTC AGC TTG CTG GAC AAA ATA TAC ACA AGT CCT CTG TGT
                                                                                       283
96 Asn Ala Leu Ser Leu Leu Asp Lys Ile Tyr Thr Ser Pro Leu Cys
                      60
                                              65
99 TAAAGGAGCC ATCACTGCCA GGAGCCCTAA GGAAGCCACT GAACTGATCA CTAAGTAGTC
                                                                                       343
101 TCAGCAGCCT GCCATGTCCA GGTGTCTTAC TAGAGGATTC CAGCAATAAA AGCCTGGCAA
                                                                                        403
103 TTCAAACAAA AAAAA
                                                                                        418
106 (2) INFORMATION FOR SEQ ID NO: 2:
         (i) SEQUENCE CHARACTERISTICS:
108
               (A) LENGTH: 94 amino acids
109
                (B) TYPE: amino acid (D) TOPOLOGY: linear
110
111
         (ii) MOLECULE TYPE: protein
113
         (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
115
117 Cys Ile Met Lys Gly Ala Arg Val Leu Val Leu Leu Trp Ala Ala Leu 118 -24 -20 -15 -10
120 Leu Leu Ile Trp Gly Gly Asn Cys Glu Ile Cys Pro Ala Val Lys Arg 121 \phantom{000} -5 \phantom{000} 5
123 Asp Val Asp Leu Phe Leu Thr Gly Thr Pro Asp Glu Tyr Val Glu Glu 124 10 15 20
126 Val Ala Gln Tyr Lys Ala Leu Pro Val Val Leu Glu Asn Ala Arg Ile
127 25 30 35 40
129 Leu Lys Asn Cys Val Asp Ala Lys Met Thr Glu Glu Asp Lys Glu Asn
                       45
                                                50
132 Ala Leu Ser Leu Leu Asp Lys Ile Tyr Thr Ser Pro Leu Cys 133 60 65 70
    (2) INFORMATION FOR SEQ ID NO: 3: (i) SEQUENCE CHARACTERISTICS:
136
138
139
                (A) LENGTH: 420 base pairs
                (B) TYPE: nucleic acid
140
141
                (C) STRANDEDNESS: single
                (D) TOPOLOGY: linear
         (ii) MOLECULE TYPE: cDNA
```

RAW SEQUENCE LISTING DATE: 09/28/2000 PATENT APPLICATION: US/09/662,784 TIME: 09:31:16

Input Set : A:\Pto.amc

```
147
        (ix) FEATURE:
                (A) NAME/KEY: CDS
                (B) LOCATION: 2..289
149
         (ix) FEATURE:
151
                (A) NAME/KEY: mat_peptide (B) LOCATION: 80..289
152
153
         (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
156
158 G GCC TGG CGG TGC TCC TGG AAA AGG ATG TTA GAC GCA GCC CTC CCA
                                                                                        46
      Ala Trp Arg Cys Ser Trp Lys Arg Met Leu Asp Ala Ala Leu Pro -26 -25 -20 -15
162 CCC TGC CCT ACT GTT GCG GCC ACA GCA GAT TGT GAA ATT TGC CCA GCC
163 Pro Cys Pro Thr Val Ala Ala Thr Ala Asp Cys Glu Ile Cys Pro Ala
166 GTG AAG AGG GAT GTT GAC CTA TTC CTG ACG GGA ACC CCC GAC GAA TAT 167 Val Lys Arg Asp Val Asp Leu Phe Leu Thr Gly Thr Pro Asp Glu Tyr 168 10 15 20
170 GTT GAG CAA GTG GCA CAA TAC AAA GCA CTA CCT GTA GTA TTG GAA AAT
                                                                                       190
171 Val Glu Gln Val Ala Gln Tyr Lys Ala Leu Pro Val Val Leu Glu Asn 172 25 30 35
174 GCC AGA ATA CTG AAG AAC TGC GTT GAT GCA AAA ATG ACA GAA GAG GAT
                                                                                       238
175 Ala Arg Ile Leu Lys Asn Cys Val Asp Ala Lys Met Thr Glu Glu Asp
                                      45
178 AAG GAG AAT GCT CTC AGC TTG CTG GAC AAA ATA TAC ACA AGT CCT CTG
                                                                                       286
179 Lys Glu Asn Ala Leu Ser Leu Leu Asp Lys Ile Tyr Thr Ser Pro Leu
180 55 60 65
182 TGT TAAAGGAGCC ATCACTGCCA GGAGCCCTAA GGAAGCCACT GAACTGATCA
183 Cys
184 70
186 CTAAGTAGTC TCAGCAGCCT GCCATGTCCA GGTGTCTTAC TAGAGGATTC CAGCAATAAA
                                                                                       399
                                                                                       420
188 AGCCTTGCAA TTCAAACAAA A
191 (2) INFORMATION FOR SEQ ID NO: 4:
193
         (i) SEQUENCE CHARACTERISTICS:
194
               (A) LENGTH: 96 amino acids
               (B) TYPE: amino acid
(D) TOPOLOGY: linear
195
        (ii) MOLECULE TYPE: protein
         (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
202 Ala Trp Arg Cys Ser Trp Lys Arg Met Leu Asp Ala Ala Leu Pro Pro 203 -26 -25 -20 -15
205 Cys Pro Thr Val Ala Ala Thr Ala Asp Cys Glu Ile Cys Pro Ala Val 206 -10 -5 1 5
208 Lys Arg Asp Val Asp Leu Phe Leu Thr Gly Thr Pro Asp Glu Tyr Val
209 10 15 20
211 Glu Gln Val Ala Gln Tyr Lys Ala Leu Pro Val Val Leu Glu Asn Ala 212 25 30 35
214 Arg Ile Leu Lys Asn Cys Val Asp Ala Lys Met Thr Glu Glu Asp Lys 215 \phantom{+}40\phantom{+}45\phantom{+}50\phantom{+}
217 Glu Asn Ala Leu Ser Leu Leu Asp Lys Ile Tyr Thr Ser Pro Leu Cys
```

RAW SEQUENCE LISTING DATE: 09/28/2000 PATENT APPLICATION: US/09/662,784 TIME: 09:31:16

Input Set : A:\Pto.amc

```
221 (2) INFORMATION FOR SEQ ID NO: 5:
         (i) SEQUENCE CHARACTERISTICS:
               (A) LENGTH: 476 base pairs
224
               (B) TYPE: nucleic acid
225
               (C) STRANDEDNESS: single (D) TOPOLOGY: linear
226
227
         (ii) MOLECULE TYPE: cDNA
229
232
         (ix) FEATURE:
              (A) NAME/KEY: CDS
233
234
               (B) LOCATION: 2..334
         (ix) FEATURE:
              (A) NAME/KEY: mat_peptide
237
               (B) LOCATION: 59..334
238
         (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
241
243 T GAC ACG ATG AGG GGG GCA CTG CTT GTG CTG GCA TTG CTG GTG ACC
244 Asp Thr Met Arg Gly Ala Leu Leu Val Leu Ala Leu Leu Val Thr
245 -19 -15 -10 -5
                                                                                   46
247 CAA GCG CTG GGC GTC AAG ATG GCG GAA ACT TGC CCC ATT TTT TAT GAC
                                                                                   94
248 Gln Ala Leu Gly Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp
249
                      1
                                        5
                                                              10
251 GTC TTT TTT GCG GTG GCC AAT GGA AAT GAA TTA CTG TTG GAC TTG TCC
                                                                                 142
252 Val Phe Phe Ala Val Ala Asn Gly Asn Glu Leu Leu Asp Leu Ser
253 15 20 25
255 CTC ACA AAA GTC AAT GCT ACT GAA CCA GAG AGA ACA GCC ATG AAA AAA
256 Leu Thr Lys Val Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys
      30
                             35
259 ATC CAG GAT TGC TAC GTG GAG AAC GGA CTC ATA TCC AGG GTC TTG GAT
                                                                                 238
260 Ile Gln Asp Cys Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp 261 45 55 60
263 GGA CTA GTC ATG ACA ACC ATC AGC TCC AGC AAA GAT TGC ATG GGT GAA
                                                                                 286
264 Gly Leu Val Met Thr Thr Ile Ser Ser Lys Asp Cys Met Gly Glu
                     65
                                           70
267 GCA GTT CAG AAC ACC GTA GAA GAT CTC AAG CTG AAC ACT TTG GGG AGA
                                                                                 334
268 Ala Val Gln Asn Thr Val Glu Asp Leu Lys Leu Asn Thr Leu Gly Arg
                                       85
271 TGAATCTTTG CCACTGATGC CCCTTCTGAG CCCCATCCTC CTGCCCTGTT CTTTACACCT
                                                                                 394
273 AAAGCTGGAA TCCAGACACC TGTCCTCACC TAATTCACTC TCAATCAGGC TGACTAGAAT
275 AAAATAACTG CATCTTAAAA AA
                                                                                 476
278 (2) INFORMATION FOR SEQ ID NO: 6:
         (i) SEQUENCE CHARACTERISTICS:
280
281
               (A) LENGTH: 111 amino acids
               (B) TYPE: amino acid (D) TOPOLOGY: linear
282
283
285
        (ii) MOLECULE TYPE: protein
287
        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
289 Asp Thr Met Arg Gly Ala Leu Leu Val Leu Ala Leu Leu Val Thr Gln 290 -19 -15 -10 -5
292 Ala Leu Gly Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp Val
```

RAW SEQUENCE LISTING DATE: 09/28/2000 PATENT APPLICATION: US/09/662,784 TIME: 09:31:16

Input Set : A:\Pto.amc

```
295 Phe Phe Ala Val Ala Asn Gly Asn Glu Leu Leu Leu Asp Leu Ser Leu 296 \phantom{000} 15 \phantom{000} 20 \phantom{000} 25
298 Thr Lys Val Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys Ile
                               35
301 Gln Asp Cys Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp Gly 302 50 55 60
304 Leu Val Met Thr Thr Ile Ser Ser Ser Lys Asp Cys Met Gly Glu Ala 305 ^{\circ} 65 ^{\circ} 70 ^{\circ} 75
307 Val Gln Asn Thr Val Glu Asp Leu Lys Leu Asn Thr Leu Gly Arg 308 80 85 90
311 (2) INFORMATION FOR SEQ ID NO: 7:
           (i) SEQUENCE CHARACTERISTICS:
313
314
                  (A) LENGTH: 469 base pairs
315
                   (B) TYPE: nucleic acid
                  (C) STRANDEDNESS: single
316
                  (D) TOPOLOGY: linear
317
          (ii) MOLECULE TYPE: cDNA
319
          (ix) FEATURE:
322
323
                  (A) NAME/KEY: CDS
                   (B) LOCATION: 1..327
324
          (ix) FEATURE:
326
                  (A) NAME/KEY: mat_peptide
(B) LOCATION: 59..327
327
328
           (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
331
333 GAC ACG ATG AGG GGG GCA CTG CTT GTG CTG GCA TTG CTG GTG ACC CAA
                                                                                                     48
335 -19 -15 -10 -5
337 GCG CTG GGC GTC AAG ATG GCG GAG ACG TGC CCC ATT TTT TAT GAC GTC
338 Ala Leu Gly Val Lys Met Ala Glu Thr Cys Pro Ile Phe Tyr Asp Val
339 1 5 10
                                                                                                     96
341 TTT TTT GCG GTG GCC AAT GGA AAT GAA TTA CTG TTG GAC TTG TCC CTC
                                                                                                    144
342 Phe Phe Ala Val Ala Asn Gly Asn Glu Leu Leu Leu Asp Leu Ser Leu 343 15 20 25
345 ACA AAA GTC AAT GCT ACT GAA CCA GAG AGA ACA GCC ATG AAA AAA ATC 346 Thr Lys Val Asn Ala Thr Glu Pro Glu Arg Thr Ala Met Lys Lys Ile 347 30 35 40 45
                                                                                                    192
349 CAG GAT TGC TAC GTG GAG AAC GGA CTC ATA TCC AGG GTC TTG GAT GGA
350 Gln Asp Cys Tyr Val Glu Asn Gly Leu Ile Ser Arg Val Leu Asp Gly
351 50 55 60
353 CTA GTC ATG ATA GCC ATC AAC GAA TAT TGC ATG GGT GAA GCA GTT CAG
                                                                                                    288
354 Leu Val Met Ile Ala Ile Asn Glu Tyr Cys Met Gly Glu Ala Val Gln
355 65 70 75
357 AAC ACC GTA GAA GAT CTC AAG CTG AAC ACT TTG GGG AGA TGAATCTTTG
358 Asn Thr Val Glu Asp Leu Lys Leu Asn Thr Leu Gly Arg
359 80 85 90
                                                                                                    337
361 CCACTGATGC CCCTTCTGAG CCCCATCCTC CTGTCCTGTT CTTTACACCT AAAGCTGGAA
                                                                                                    397
363 TCCAGACACC TGTCCTCACC TAATTCACTC TCAATCAGGC TGACTAGAAT AAAATAACTG
                                                                                                    457
365 CATCTTAAAA AA
368 (2) INFORMATION FOR SEQ ID NO: .8:
```

VERIFICATION SUMMARY DATE: 09/28/2000 PATENT APPLICATION: US/09/662,784 TIME: 09:31:17

Input Set : A:\Pto.amc

```
L:28 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:29 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:675 M:220 C: Keyword misspelled or invalid format, [(ix) FEATURE:]
L:680 M:220 C: Keyword misspelled or invalid format, [(ix) FEATURE:]
L:685 M:220 C: Keyword misspelled or invalid format, [(ix) FEATURE:]
L:690 M:220 C: Keyword misspelled or invalid format, [(ix) FEATURE:]
L:695 M:220 C: Keyword misspelled or invalid format, [(ix) FEATURE:]
L:700 M:220 C: Keyword misspelled or invalid format, [(ix) FEATURE:]
L:714 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:720 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:723 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
```